

IFN β G162C-Ig direct fusion construct open reading frame

1 ATGCCTGGGAAGATGGTCGTGATCCCTTGGAGCCCTCAAAATATACCTTTGGATAATGTTTGC A 60
M P G K M V V I L G A S N I L W I M F A

61 GCTTCTCAAGCCATGAGCTACAACCTTGCTTGGATTCTCAAAAGACAGCAATTTTCAG 120
A S Q A M S Y N L L G F L Q R S S N F Q

121 TGTCAAGAAGCTCCCTGTGGCAATTGAATGGGAGGCTTGAATACTGCTCAAGGACAGGATG 180
C Q K L L W Q L N G R L E Y C L K D R M

181 AACTTTGACATCCCCTGAGGAGATTAAAGCAGCTGCAGCAGTTCCAGAAGGAGGACGCCCA 240
N F D I P E E I K Q L Q Q F Q K E D A A

241 TTGACCATCTATGAGATGCTCCAGAACATCTTTGCTATTTTCAGACAAGATTCACTAGC 300
L T I Y E M L Q N I F A I F R Q D S S S

301 ACTGGCTGGAATGAGACTATTTGTTGAGAACCTCCTGGCTAATGTCTATCATCAGATAAAC 360
T G W N E T I V E N L L A N V Y H Q I N

361 CATCTGAAGACAGTCCCTGGAAGAAAACCTGGAGAAAGAGATTTCACCAGGGGAAAACCTC 420
H L K T V L E E K L E K E D F T R G K L

421 ATGAGCAGTCTGCCACCTGAAAAGATATTATGGGAGGATTCTGCAATTACCTGAAGGCCAAG 480
M S S L H L K R Y Y G R I L H Y L K A K

FIG. 1 A

481 GAGTACAGTCACTGTGCTGGACCATAGTCAGAGTGGAATCCTAAGGAACCTTTACTTC 540
E Y S H C A W T I V R V E I L R N F Y F

541 ATTAACAGACTTACATGTACCTCCGAAACGTCCGACAAACTCACACATGCCACCGTGC 600
I N R L T C Y L R N V D K T H T C P P C

601 CCAGCACCTGAACCTCTGGGGGACCGTCAGTCTTCCTCTTCCCCCAAACCAAGGAC 660
P A P E L L G G P S V F L F P P K P K D

661 ACCCTCATGATCTCCCGGACCCCTGAGGTACATGCGTGGTGGACGTGAGCCACGAA 720
T L M I S R T P E V T C V V V D V S H E

721 GACCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGGTGGAGGTGCATAATGCCAAGACA 780
D P E V K F N W Y V D G V E V H N A K T

781 AAGCCGCGGAGGAGCAGTACAACAGCACGTACCGTGTGTGTGTCAGCGTCTCACCGTCTG 840
K P R E E Q Y N S T Y R V V S V L T V L

841 CACCAGGACTGGCTGAATGGCAAGGAGTACAAAGTCAAGGTCTCCCAACAAAGCCCTCCCA 900
H Q D W L N G K E Y K C K V S N K A L P

901 GCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCGAGAACCCACAGGTGTAC 960
A P I E K T I S K A K G Q P R E P Q V Y

FIG. 1 B

961 ACCCTGCCCCCATCCCGGGATGAGCTGACCAAGAACAGGTACGCCCTGACCTGCCCTGGTC 1020
T L P P S R D E L T K N Q V S L T C L V

1021 AAAGGCTTCTATCCCAAGCACATCGCCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAAC 1080
K G F Y P S D I A V E W E S N G Q P E N

1081 AACTACAAGACCAAGCCCTCCCGTGTGGACTCCGACGGCTCCTTCTCTACAGCAAG 1140
N Y K T T P P V L D S D G S F F L Y S K

1141 CTCACCGTGGACAAGAGCAGGTGGCAGAGGGGAACGCTCTCTCATGCTCCGTGATGCAT 1200
L T V D K S R W Q Q G N V F S C S V M H

1201 GAGGCTCTGCACAACCCTACACGAGAGCCCTCTCCCTGTCTCCCGGGAATGA 1257
E A L H N H Y T Q K S L S L S P G K *

FIG. 1 C

IFN β G162C-Ig fusion G4S linker construct open reading frame

1 ATGCCTGGGAAGATGGTCGTGATCCTTGGAGCCCTCAAATATACTTTGGATAATGTTTGCA 60
M P G K M V V I L G A S N I L W I M F A

61 GCTTCTCAAGCCATGAGCTACAACCTGCTTGGATTCTTACAAAGACGACGCAATTTTCAG 120
A S Q A M S Y N L L G F L Q R S S N F Q

121 TGTCAAGAAGCTCCTGTGGCAATTGAATGGGAGGCTTGAATACTGCTCAAGGACAGGATG 180
C Q K L L W Q L N G R L E Y C L K D R M

181 AACTTTGACATCCCTGAGGAGATTAAACAGCTGCAGCAGTTCCAGAAGGAGGACGCCGCA 240
N F D I P E E I K Q L Q Q F Q K E D A A

241 TTGACCATCTATGAGATGCTCCAGAACATCTTTGCTATTTTCAGACAAGATTCATCTAGC 300
L T I Y E M L Q N I F A I F R Q D S S S

301 ACTGGCTGGAATGAGACTATTGTTGAGAACCCTCCTGGCTAATGTCTATCATCAGATAAAC 360
T G W N E T I V E N L L A N V Y H Q I N

361 CATCTGAAGACAGTCTCTGGAAGAAAACCTGGAGAAGAAGATTTCACCAGGGGAAACTC 420
H L K T V L E E K L E K E D F T R G K L

FIG. 2A

421 ATGAGCAGTCTGCACCTGAAAAGATATTATGGGAGGATTCTGCATTACCTGAAGGCCAAG 480
M S S L H L K R Y Y G R I L H Y L K A K
481 GAGTACAGTCACTGTGCTGGACCATAGTCAGAGTGGAAATCCTAAGAACTTTTACTTC 540
E Y S H C A W T I V R V E I L R N F Y F
541 ATTAACAGACTTACATGTACCTCCGAAACGGCGGTGGTGGCAGCGTCGACAAAACCTCAC 600
I N R L T C Y L R N G G G S V D K T H
601 ACATGCCACCGTGCCAGCACCTGAACCTCTGGGGGACCGTCAGTCTTCTCTCCCC 660
T C P P C P A P E L L G G P S V F L F P
661 CCAAAACCCAGGACACCCCTCATGATCTCCGGACCCCTGAGGTCAATGCGTGGTG 720
P K P K D T L M I S R T P E V T C V V
721 GACGTGAGCCACGAAGACCCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGAGGTG 780
D V S H E D P E V K F N W Y V D G V E V
781 CATAATGCCAAGACAAAGCCGGGAGGAGCAGTACAACAGCACGTACCGTGTGTCAGC 840
H N A K T K P R E E Q Y N S T Y R V V S
841 GTCCCTCACCGTCTGCACCCAGGACTGGCTGAATGGCAAGGAGTACAAGTCAAGGTCTCC 900
V L T V L H Q D W L N G K E Y K C K V S
901 AACAAAGCCCTCCAGCCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGCAGCCCCGA 960
N K A L P A P I E K T I S K A K G Q P R

FIG. 2B

961 GAACACAGGTGTACACCCCTGCCCCCACTCCCGGGATGAGCTACCAAGAACCAGGTCAGC 1020
E P Q V Y T L P P S R D E L T K N Q V S

1021 CTGACCTGCCCTGGTCAAGGCTTCTATCCACGCGACATCGCCGTGGAGTGGAGAGCAAT 1080
L T C L V K G F Y P S D I A V E W E S N

1081 GGGCAGCCGGAGAACTACAAGACACCGCCTCCCGTGTGGACTCCGAGGGCTCCTTC 1140
G Q P E N N Y K T T P P V L D S D G S F

1141 TTCCTCTACAGCAAGCTCACCGTGGACAAGAGCAGGTGGCAGCGGGAACGTCCTCTCA 1200
F L Y S K L T V D K S R W Q Q G N V F S

1201 TGCTCCGTGATGCATGAGGCTCTGCACAACCACCTACACGCAAGAGCCCTCTCCCTGTCT 1260
C S V M H E A L H N H Y T Q K S L S L S

1261 CCGGGGAATGA 1272
P G K *

FIG. 2 C

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